

CLAIMS

1. A metal laminate which includes a layer obtained by laminating a metal layer and an insulating layer, where the insulating layer is subjected to an etching processing, wherein, in a surface of the metal layer which is positioned at such a side that the metal layer comes in contact with the insulating layer, respective concentrations of main metal element and oxygen element constituting the metal layer are measured from the surface of the metal layer towards inside of the metal layer in a time-elapsing manner according to AES (Auger electron spectroscopy) and a value of the thickness of a metal oxide film of the surface of the metal layer measured at a time when atomic concentrations of the main metal element and the oxygen element constituting the metal layer become equal to each other is in a range of at least 0Å to less than 50Å.

2. The metal laminate according to claim 1, wherein the metal layer includes at least one element selected from the group consisting of iron element, copper element, aluminum element, nickel element and molybdenum element.

3. The metal laminate according to claim 1, wherein the insulating layer is a resin selected from the group comprising of polyimide, polyamide, polyamideimide.

4. The metal laminate according to claim 1, wherein a constitution

of the metal laminate is a double-sided metal laminate comprising a metal layer/a polyimide layer/a SUS layer selected from the group consisting of copper, SUS and copper alloy.

5. The metal laminate according to claim 4, wherein polyimide comprises a constitution of thermoplastic polyimide/non-thermoplastic polyimide/thermoplastic polyimide.

6. A flexure which is used in a suspension for a hard disc, manufactured from a metal laminate according to any one of claims 1 to 5.

7. A method for manufacturing a metal laminate which includes a layer obtained by laminating a metal layer and an insulating layer and where the insulating layer is subjected to an etching processing, wherein, when an insulating layer is laminated on metal, in a surface of the metal layer which is positioned on such a side that the metal layer comes in contact with the insulating layer, respective concentrations of main metal element and oxygen element constituting the metal layer are measured from the surface of the metal layer towards inside of the metal layer in a time-elapsing manner according to AES (Auger electron spectroscopy) and metal meeting the condition that a value of the thickness of a metal oxide film of the surface of the metal layer measured at a time when atomic concentrations of the main metal element and the oxygen element constituting

the metal layer become equal to each other is in a range of at least 0Å to less than 50Å is selected and used.

8. A plasma etching method which uses a metal laminate according to any one of claims 1 to 5 as a material to be etched.

9. A wet etching method of a metal laminate according to any one of claims 1 to 5, where a metal laminate is etched with alkaline aqueous solution.